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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,811	10/30/2003	Douglas Gene Keithley	10030825-1	1294

7590 09/21/2005

AGILENT TECHNOLOGIES, INC.
Legal Department, DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER

NGUYEN, HAIL

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary**Application No.**

10/696,811

Applicant(s)

KEITHLEY ET AL.

Examiner

Hai L. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: a delay, a divider, and a D Flip-flop as shown in Fig. 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which

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it is most nearly connected, to make and/or use the invention. The claimed limitation that "a predictor and corrector that receive the dithered signal and the reference signal, generating a "remove pulse" signal; and an output generator, receiving the dithered signal, reference signal, and "remove pulse" signal, generating a "clear pulse" signal and the constant frequency output", in claim 3, has not been enabled in the specification because the details of such function is not seen in the description of the preferred embodiment. For example, insofar as understood, whenever the synchronizer (26 in instant Fig. 5) is clocked by the dither signal, that event will clear both counters (30, 32) of the predictor (22-34). Therefore, it is not clear as currently defined, how the output generator (the D flip-flop which outputs the Fout signal) can perform that recited function such as generating a "clear pulse" signal and the constant frequency output", it appears that its data input is never changed.

4. Claims 4-6 and 8-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claimed limitation that "a predictor, generating a first output signal indicative of the average number of dithered periods to remove per dithered period", in claim 4, has not been enabled in the specification because the details of such function is not seen in the description of the preferred embodiment. For example, insofar as understood, whenever the synchronizer (26 in instant Fig. 5) is clocked by the dither signal, that event will clear both counters (30, 32) of the predictor (22-34). Therefore, it is not clear as currently defined, how the predictor can perform that recited

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function such as generating the average number of dithered periods to remove per dithered period.

The claimed limitation that "selecting a desired number of periods in the dithered signal to receive during a sample period of the reference signal; counting the actual number of periods in the dithered signal during the sample period", in claim 8, has not been enabled in the specification for the same reasons. Note the above discussion with regard to claims 3-6.

The claimed limitation that "determining an average fractional number of dithered periods of the dithered signal to remove each dithered period", in claim 9, has not been enabled in the specification for the same reasons. Note the above discussion with regard to claims 3-6.

The claimed limitation that "a predictor operative to estimate an average amount of correction per sample; a corrector operative to measure actual error in a previous sample", in claim 13, has not been enabled in the specification for the same reasons. Note the above discussion with regard to claims 3-6.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 7 recites the limitations "the system clock" and "the PLL output" in lines 2-3.

There are insufficient antecedent basis for these limitations in the claim. Furthermore, claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the

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necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are the lack of structural and/or functional connections between the dithered signal; the reference signal; and data and control signals; recited in claim 1, and others elements of the frequency synthesizer.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Murayama (US 5,719,512).

With regard to claim 1, Murayama discloses in Fig. 6 a circuit comprising a reference signal (22); a frequency synthesizer (11, 23, 51, 61), receiving a dithered signal (14) and the reference signal, generating a constant frequency output (16); and configuration registers (61, it should be understood that 61 comprises registers since it is latched by the clock signal 62) transceiving data and control signals with the frequency synthesizer.

With regard to claim 2, the circuit further comprises a modulated analog phase lock loop (21, 24, 11, 23, 51), receiving the reference signal (22), generating the dithered signal (14).

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Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. For example, Patterson (US 5,821,816) is cited as of interest because it discloses an integer division variable frequency synthesis apparatus and method.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 571-272-1747 and Right Fax number is 571-273-1747. The examiner can normally be reached on Monday-Thursday.

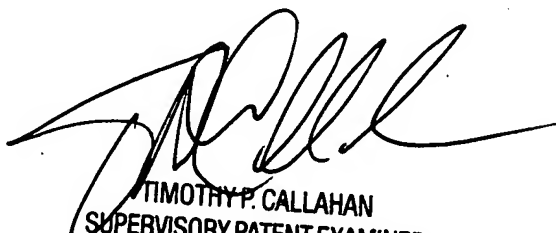
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The official fax phone number for the organization where this application or proceeding is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1562.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HLN

September 15, 2005


TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800